

**RAILROAD COMMISSION OF TEXAS****Form W-2**

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Status: Approved
Date: 10/29/2018
Tracking No.: 196746

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG**OPERATOR INFORMATION**

Operator Name: XTO ENERGY INC. Operator No.: 945936
Operator Address: ATTN: DEEANN KEMP 6401 HOLIDAY HILL RD #5 MIDLAND, TX 79707-2156

WELL INFORMATION

API No.: 42-495-33713 County: WINKLER
Well No.: 1310H RRC District No.: 08
Lease Name: UNIVERSITY BLK 20 Field Name: TWO GEORGES (BONE SPRING)
RRC Lease No.: 42354 Field No.: 92100050
Location: Section: 13, Block: 20, Survey: UL, Abstract: U14

Latitude: Longitude:
This well is located 7.2 miles in a W
direction from WINK,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential
Type of completion: New Well
Well Type: Producing Completion or Recompletion Date: 06/14/2018

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen	07/21/2017	813661
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 07/13/2018	Date of first production after rig released: 06/14/2018
Date plug back, deepening, recompletion, or drilling operation commenced: 07/13/2017	Date plug back, deepening, recompletion, or drilling operation ended: 10/30/2017
Number of producing wells on this lease in this field (reservoir) including this well: 9	Distance to nearest well in lease & reservoir (ft.): 509.0
Total number of acres in lease: 1381.51	Elevation (ft.): 2812 GR
Total depth TVD (ft.): 11880	Total depth MD (ft.): 22117
Plug back depth TVD (ft.):	Plug back depth MD (ft.):
Was directional survey made other than inclination (Form W-12)? Yes	Rotation time within surface casing (hours): 277.5
Recompletion or reclass? No	Is Cementing Affidavit (Form W-15) attached? Yes
Type(s) of electric or other log(s) run: None	Multiple completion? No
Electric Log Other Description:	
Location of well, relative to nearest lease boundaries of lease on which this well is located:	Off Lease : No
239.0 Feet from the North Line and	
1224.0 Feet from the East Line of the	
	UNIVERSITY BLK 20 Lease.

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type
PACKET: N/A			

W2: N/A

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:

GAU Groundwater Protection Determination	Depth (ft.): 950.0	Date: 12/12/2016
SWR 13 Exception	Depth (ft.):	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 06/18/2018	Production method: Flowing
Number of hours tested: 24	Choke size: 40/64
Was swab used during this test? No	Oil produced prior to test: 1936.00

PRODUCTION DURING TEST PERIOD:

Oil (BBLs): 921.00	Gas (MCF): 1054
Gas - Oil Ratio: 1144	Flowing Tubing Pressure: 1109.00
Water (BBLs): 4098	

CALCULATED 24-HOUR RATE

Oil (BBLs): 921.0	Gas (MCF): 1054
Oil Gravity - API - 60.: 42.3	Casing Pressure: 1280.00
Water (BBLs): 4098	

CASING RECORD

Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Stage Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	9 5/8	12 1/4	5164	1160		C	950	1265.0	0	Circulated to Surface
2	Surface	9 5/8	12 1/4	5164			C	3060	5642.0	1160	Circulated to Surface
3	Intermediate	7	8 3/4	12090			PREM H	1125	2777.0	2000	Calculation

LINER RECORD

Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	4 1/2	6 1/8	1189	22108	H	960	1196.0	1118 9	Calculation

TUBING RECORD

Row	Size (in.)	Depth Size (ft.)	Packer Depth (ft.)/Type
1	2 7/8	11127	11111 / 7" AS1-XW

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 18222	21822.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.

Was hydraulic fracturing treatment performed? Yes

Is well equipped with a downhole actuation sleeve? No

If yes, actuation pressure (PSIG):

Production casing test pressure (PSIG) prior to hydraulic fracturing treatment: 7500

Actual maximum pressure (PSIG) during hydraulic fracturing: 9140

Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)? Yes

Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
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FORMATION RECORD

<u>Formations</u>	<u>Encountered</u>	<u>Depth TVD (ft.)</u>	<u>Depth MD (ft.)</u>	<u>Is formation isolated?</u>	<u>Remarks</u>
RUSTLER - POSSIBLE FLOW; POSSIBLE USABLE QUALITY W COLBY-QUEEN	Yes	834.0	834.0	Yes	
YATES	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
QUEEN-SEVEN RIVERS	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE HOLT	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
DELAWARE	Yes	5159.0	5161.0	Yes	
GLORIETA	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
CLEARFORK	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
WICHITA ALBANY	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
BRUSHY CANYON	Yes	7608.0	7610.0	Yes	
CHERRY CANYON	Yes	6150.0	6153.0	Yes	
CANYON	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
BONE SPRINGS	Yes	9010.0	9013.0	Yes	
MONTOYA	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
WADDELL	No			No	NOT ENCOUNTERED IN THE IMMEDIATE AREA
WOLFCAMP	Yes	11828.0	11938.0	Yes	
ATOKA	No			No	DEEPER THAN TD
STRAWN	No			No	DEEPER THAN TD
PENNSYLVANIAN	No			No	DEEPER THAN TD
MISSISSIPPIAN	No			No	DEEPER THAN TD
DEVONIAN	No			No	DEEPER THAN TD
SILURIAN	No			No	DEEPER THAN TD
FUSSELMAN	No			No	DEEPER THAN TD
ELLENBURGER	No			No	DEEPER THAN TD
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?					No
Is the completion being downhole commingled (SWR 10)?					No

REMARKS

REPORTING INITIAL POTENTIAL WELL TEST; WELLBORE PREVIOUSLY REPORTED, TRACKING # 190775

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2018-10-15 09:19:23.932] EDL=3600 feet, max acres=640, TWO GEORGES (BONE SPRING) oil well;

take points: 18222-21822 feet

CASING RECORD :

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed Name: Tessa Fitzhugh

Title: Regulatory Analyst

Telephone No.: (432) 620-4336

Date Certified: 07/27/2018



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

CEMENTING REPORT

Cementer: Fill in shaded areas.

Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name: XTO ENERGY	Operator P-5 No.: 945936
Cementer Name: HALLIBURTON ENERGY SERVICES	Cementer P-5 No.: 347151

WELL INFORMATION

District No.: 08	County: WINKLER	
Well No.: 1310H	API No.: 42-495-83713	Drilling Permit No.:
Lease Name: UNIVERSITY BLK 20	Lease No.: 42364	
Field Name: two Georges (Bone Spring)	Field No.: 92100060	

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:			
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.):	Top of liner (ft.):			
		Setting depth liner (ft.):			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date: 6-22-17			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total	0			0	0

II. CASING CEMENTING DATA

Type of casing: <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input checked="" type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.): 12 1/4	Depth of drilled hole (ft.): 5105	Est. % wash-out or hole enlargement: 20%			
Size of casing in O.D. (in.): 9 5/8	Casing weight (lbs/ft) and grade: 40	No. of centralizers used: 31			
Tapered string drilled hole size (in.)	Tapered string depth of drilled hole (ft.)				
Upper: Lower:	Upper: Lower:				
Tapered string size of casing in O.D. (in.)	Tapered string casing weight (lbs/ft) and grade	Tapered string no. of centralizers used			
Upper: Lower:	Upper: Lower:	Upper: Lower:			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Setting depth shoe (ft.): 5104				
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): 1160	Cementing date: 7-18-17			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	2555	C	REMARKS	4969.47	2147
2	505	C	NA	672.66	3018
3					
Total	3060			5642.13	5165

III. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input checked="" type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.): 12 1/4	Depth of drilled hole (ft.): 5105	Est. % wash-out or hole enlargement: 20%			
Size of casing in O.D. (in.): 9 5/8	Casing weight (lbs/ft) and grade: 40	No. of centralizers used: 31			
Tapered string drilled hole size (in.)	Tapered string depth of drilled hole (ft.)				
Upper: Lower:	Upper: Lower:				
Tapered string size of casing in O.D. (in.)	Tapered string casing weight (lbs/ft) and grade	Tapered string no. of centralizers used			
Upper: Lower:	Upper: Lower:	Upper: Lower:			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth tool (ft.): 1160				
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): 0	Cementing date: 7-18-17			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	950	C	NA	1265.4	1159
2					
3					
Total	950			1265.4	1159

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

SALES ORDER 904155258 SLURRY1 LEAD: 0.125 LBM POLY-E-FLAKE, 3 LBM KOL-SEAL, 0.65% HR-800
CIRCULATED BOBBLES/347 SKS ON OF 2ND STAGE LEAD SLURRY

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

BRANDON MACHADO SERVICE SUPERVISOR

Halliburton

[Signature]
Signature

Name and title of cementer's representative

Cementing Company

1301 W. Webb St.

Brownfield, Tx, 79316

575-392-0700

7-18-17

Address

City, State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Tessa Fitzhugh
Typed or printed name of operator's representative

Reg Analyst
Title

[Signature]
Signature

1401 Holiday Hill Rd Bldg 5 Midland TX 79707

Address

City, State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.
The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



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Operator: Fill in other items.

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Operator P-5 No.: 91459316

Cementer Name: HALLIBURTON ENERGY SERVICES

Cementer P-5 No.: 347151

WELL INFORMATION

District No.: 08

County: WINKLER

Well No.: #1310H

API No.: 42495-33713

Drilling Permit No.:

Lease Name: UNIVERSITY BLK 20

Lease No.: 42354

Field Name: W George (bone spring)

Field No.: 92100080

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☒ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.): 8 3/4 Depth of drilled hole (ft.): 2090 Est. % wash-out or hole enlargement: 20%

Size of casing in O.D. (in.): 7 Casing weight (lbs/ft) and grade: 29# P-110 No. of centralizers used: 58

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☒ NO If no for surface casing, explain in Remarks. Setting depth shoe (ft.): 12090 Top of liner (ft.):

Hrs. waiting on cement before drill-out: 54 Calculated top of cement (ft.): 2000 Cementing date: 8/16/2017

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	885	PREMIUM H	REMARKS	2478	16470
2	240	PREMIUM H	REMARKS	299	1848
3					
Total	1125			2777	18318

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings

Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:

Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:

Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)

Upper: Lower: Upper: Lower:

Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used

Upper: Lower: Upper: Lower: Upper: Lower:

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO Setting depth shoe (ft.):

Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total	0			0	0

III. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement/DV tool ☐ Multiple parallel strings

Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:

Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:

Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)

Upper: Lower: Upper: Lower:

Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used

Upper: Lower: Upper: Lower: Upper: Lower:

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO Setting depth tool (ft.):

Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total	0			0	0

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS
<p>LEAD SLURRY: .05% SA-1075, .75% HR-800, .25 LBM D-AIR TAIL SLURRY: .50% LAP-1, .30% CFR-3, .25 LBM D-AIR, .15% HR-601 DID NOT CIRCULATE CEMENT BACK TO SURFACE (SO#904187223)</p>

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MANUEL DOMINGUEZ SS III

Halliburton

Name and title of cementer's representative	Cementing Company	Signature	
1301 W. Webb St.	Brownfield, Tx, 79316		
Address	City, State, Zip Code	Tel: Area Code Number	Date: mo. day yr.
		575-392-0700	8/16/2017

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Typed or printed name of operator's representative	Title	Signature	
W. Illinois, Ste 100 Midland TX 79701	Analyst		
Address	City, State, Zip Code	Tel: Area Code Number	Date: mo. day yr.
		432 620-4330	8-13-2018

Instructions for Form W-15, Cementing Report

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CEMENTING REPORT

Cementer: Fill in shaded areas.
Operator: Fill in other items.

OPERATOR INFORMATION	
Operator Name: XTO ENERGY INC EBUS	Operator P-5 No.: 9469316
Cementer Name: HALLIBURTON	Cementer P-5 No.: 347151

WELL INFORMATION	
District No.: 08	County: WINKLER
Well No.: 1310H	API No.: 42495-33713
Lease Name: UNIVERSITY BLK 20	Drilling Permit No.:
Field Name: two george (bone spring)	Lease No.: 42354
	Field No.: 92100050

I. CASING CEMENTING DATA			
Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Liner <input type="checkbox"/> Production			
Drilled hole size (in.): 6 1/8	Depth of drilled hole (ft.): 22108	Est. % wash-out or hole enlargement: 20%	
Size of casing in O.D. (in.): 4 1/2	Casing weight (lbs/ft) and grade: 13.50	No. of centralizers used:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 22108	Top of liner (ft.): 11189	
		Setting depth liner (ft.): 22108	
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): 11189	Cementing date: 10/26/2017	

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	960	H	SEE REMARKS	1196.16	12600
2					
3					
Total	960			1196.16	12600

II. CASING CEMENTING DATA			
Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings			
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:	
Tapered string drilled hole size (in.)	Tapered string depth of drilled hole (ft.)		
Upper:	Lower:	Upper:	Lower:
Tapered string size of casing in O.D. (in.)	Tapered string casing weight (lbs/ft) and grade	Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth shoe (ft.):		
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:	

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total	0			0	0

III. CASING CEMENTING DATA			
Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings			
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:	
Tapered string drilled hole size (in.)	Tapered string depth of drilled hole (ft.)		
Upper:	Lower:	Upper:	Lower:
Tapered string size of casing in O.D. (in.)	Tapered string casing weight (lbs/ft) and grade	Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth tool (ft.):		
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:	

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total	0			0	0

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS
LEAD ADDITIVES: 0.40% HALAD R-344, 0.35% HR-601, 0.25% LBM D AIR 5000. CIRCULATED 27 BBLs OF CEMENT OF LINER TOP.

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

RUBEN MEDINA SERVICE SUPERVISOR

Halliburton

Name and title of cementer's representative

Cementing Company

Signature

6155 W. Murphy St.

Odessa, TX, 79763

432-571-8600

10/26/2017

Address

City, State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Tessa Fitzhugh

Title

Signature

Typed or printed name of operator's representative

6401 Holliday Hill Rd Bldg 5 Midland TX 79707

City, State, Zip Code

Tel: Area Code

Number

4-11-2018

Address

City, State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.
The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_loc=&p_loc=&p_loc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_loc=&p_loc=&p_loc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

CHRISTI CRADDICK, CHAIRMAN
DAVID PORTER, COMMISSIONER
RYAN SITTON, COMMISSIONER



LORI WROTENBERY
DIRECTOR, OIL AND GAS DIVISION

D. CRAIG PEARSON
DISTRICT DIRECTOR

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

OPERATOR Name: XTO ENERGY INC.

RE: Lease: UNIVERSITY BLK 20

Address1: ATTN ALAN CODY

Address2: 810 HOUSTON STREET

City: FORT WORTH

State: TX

Well No: 1310H

Sec: 13 **Block:** 20

County: WINKLER

Survey Name: UL

SWR13EX Application Number: 11883

Drilling Permit No: 813661

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY BLK 20
WELL NUMBER: 1310H has been approved by the Railroad Commission of Texas District Office.

- a. A copy of this approved letter must be kept on location during all phases of drilling and/or plugging operations. Once approved, changes CANNOT be made to the Proposed Casing Program on the original application without additional approval from the Railroad Commission of Texas District Office.
- b. Any substantive modifications to the cement program require prior approval from the Railroad Commission of Texas District Office, and may require re-submission of the SWR 13 (Statewide Rule 13) Alternate Surface Casing Application. Contact the Railroad Commission of Texas District Office for more information.
- c. The tail slurry must be sufficient to fill the Zone of Critical Cement as described in Statewide Rule 13(b)(1)(H)(i). In addition, all cement slurries must be mixed on location as described in Application for Alternate Surface Casing Program.
- d. The casing and cement program shall adhere to the following specifications:

Set 5200 feet of surface casing with a multistage tool set at a depth of not less than 1100 feet. Circulate cement from the multistage tool to the ground surface. If cement does not circulate to surface during the first stage, the multistage tool MUST be opened and neat cement be circulated from the tool to the surface.

The multistage tool is included as a contingency measure to achieve cement returns to surface.

Please notify the Midland District Office immediately if any gas, H₂S or otherwise, is encountered before surface casing is set.

IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST CONTACT THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE IMMEDIATELY AND FOLLOW THE PROCEDURES SET OUT IN RULE 13(b)(1)(H)(iii) OR AS REQUIRED BY THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE.

You must comply with all other provisions of SWR 13 (Statewide Rule 13) and a representative of the cementing company who performs the cementing job for the protection of usable quality water strata must sign the Form W-15 attesting to the information regarding cementing operations performed; including circulation of cement. (Note: If surface casing is set below the approved depth, this can result in denial of future Statewide Rule 13(b)(1)(H)(i) requests.) A condition of the approved drilling permit requires notification to the Railroad Commission of Texas District Office eight (8) hours prior to the time casing is to be set/cemented in the well. If your exception request was submitted after the subject well has been drilled and completed, the operator may be referred for enforcement action.

This authorization shall expire within five (5) years from the date the Groundwater Protection Determination was issued, or at the expiration of the drilling permit (if the well is not spudded prior to expiration) for the referenced well, whichever occurs first. Furthermore, this authorization supersedes any prior authorizations issued for the referenced well.

This exception is based on information provided when the application was submitted on 12/19/2016. If any information has changed, you must contact the appropriate Railroad Commission of Texas District Office, and submit a new application if applicable. If you have questions, please contact the appropriate Oil and Gas District office.

RRC APPROVAL BY: Erik Hanson

DATE: 12/20/2016

D. CRAIG PEARSON

DISTRICT DIRECTOR



APPLICATION FOR APPROVAL OF SURFACE CASING > 3500 FEET
Statewide Rule 13(b)(1)(A)
RAILROAD COMMISSION OF TEXAS

Operator's Name and Address: XTO Energy, Inc
500 W. Illinois St Ste 100
Midland, Texas 79701

P5 Number: 945936

Area for review: Single Well Location

Lease Name: University Blk 20

Field Name: Phantom (Wolfcamp), Two Georges (Bone Spring) County: Winkler

Survey: UL

Abstract: _____

Drilling Permits: 813661

Note: Attach a map if the request is for more than one pad.

How will the operator maintain well control during drilling operations:

Adequate mud weight will be used to control well. This mud weight is known from offset wells.

Mud Type: Fresh Water/Cut Brine 8.5-9.98ppg. 29-30s/qt. 9.5-10.0ph with LCM as needed.

How will the operator ensure cement is circulated to surface and that there is adequate bonding of cement:

Cement design will include 100% excess on both lead and tail slurries. A DV tool will be run at 1100' as a contingency though cement was able to be brought to surface on the 1st Stage in offset wells.

How will the operator prevent the migration of formation fluids thru the annular space:

Proper mud design, cement volume and slurry design will prevent migration of formation fluid. Cement will be brought to surface.

Signature: Stephanie Rabadue Name: Stephanie Rabadue Date: 12/16/2016 Phone: 432-620-6714

RRC District Office Action:

☒ Approved

☐ Approved as Modified

☐ Denied

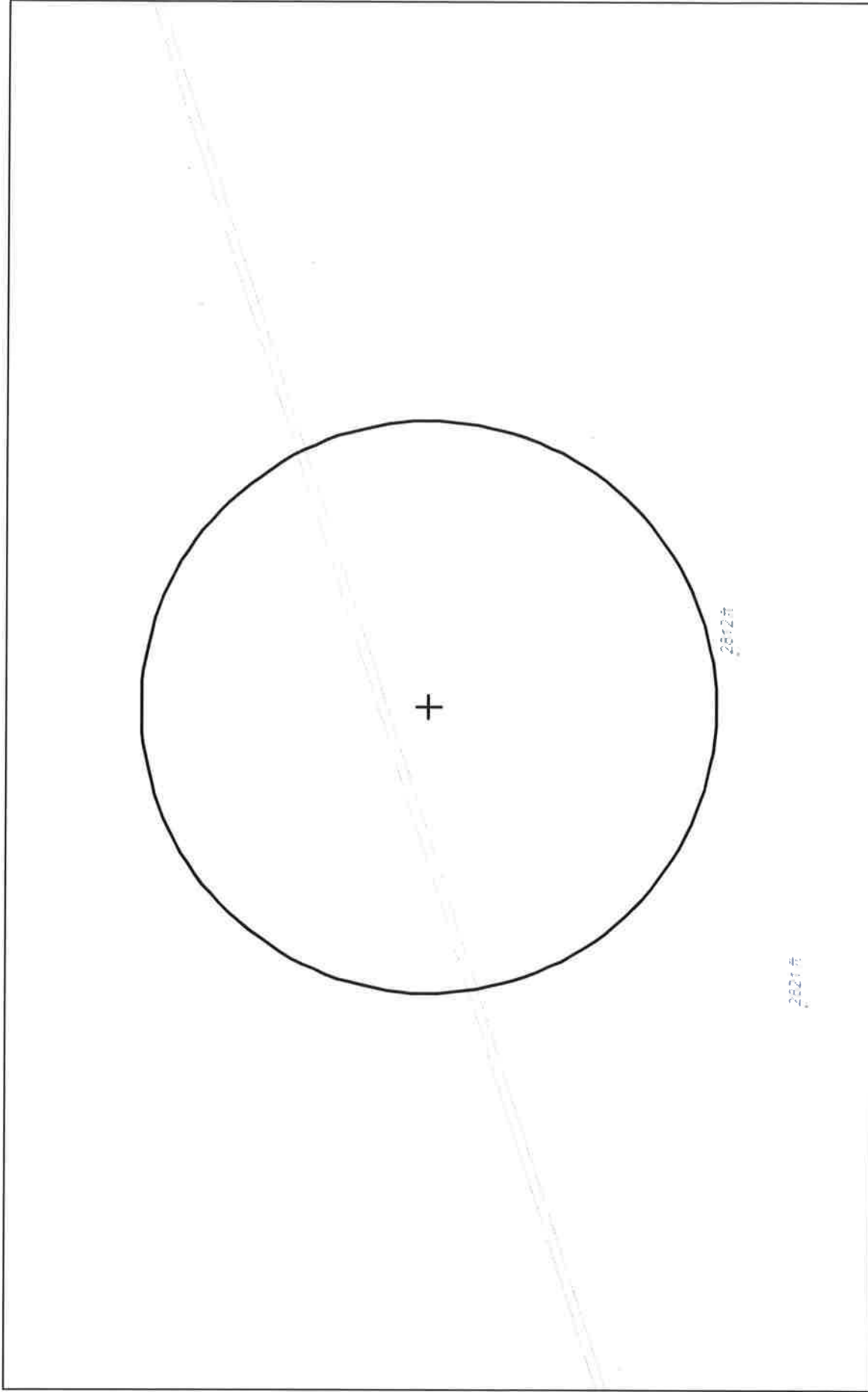
By: Erik Hanson

Date: 12-20-16

RRC Use Only▶

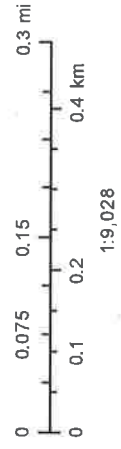
Remarks/Modifications:

University Blk 20 1310H

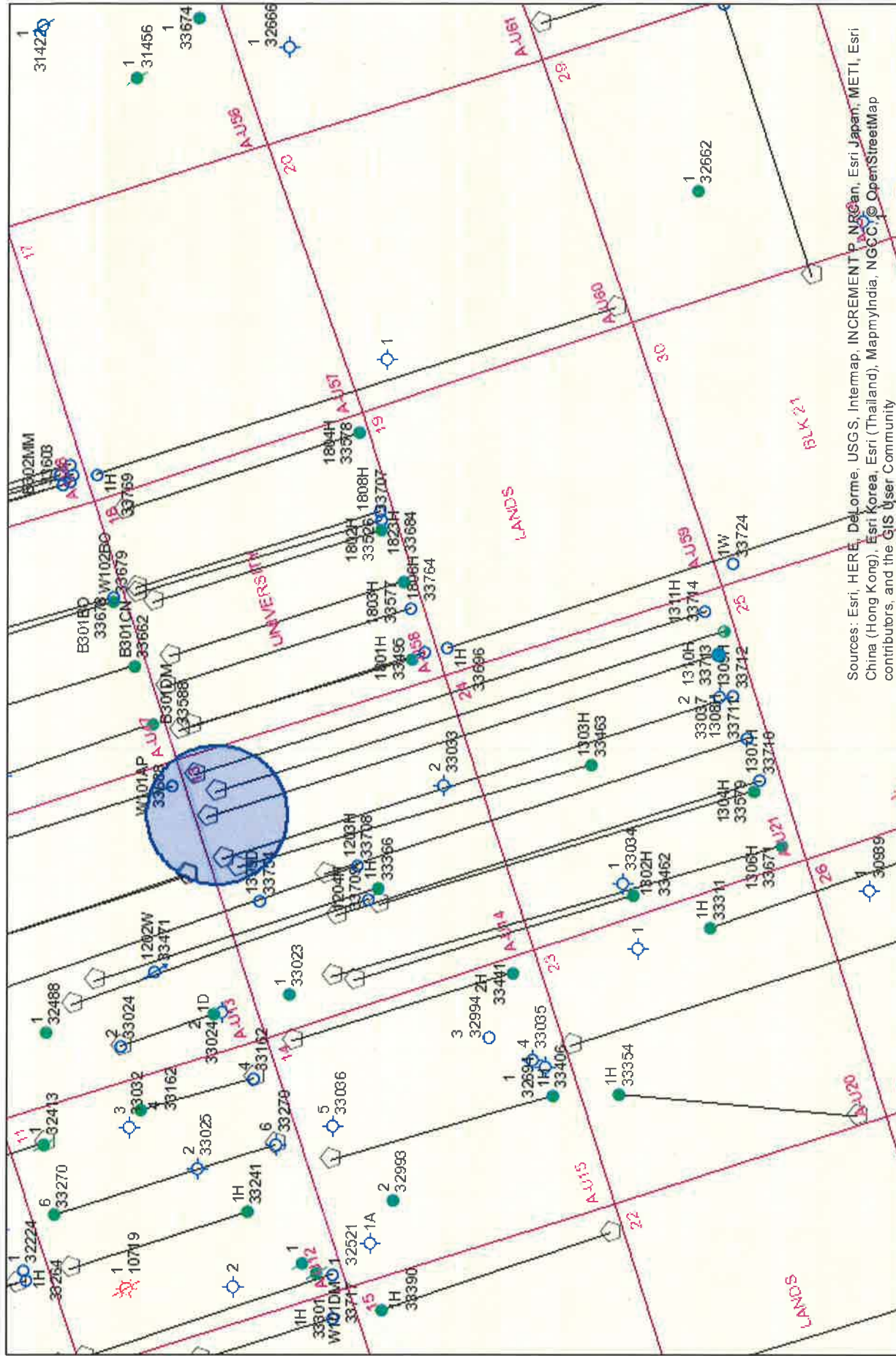


December 16, 2016

The data in Water Data Interactive represents the best available information provided by the TWDB and third-party cooperators of the TWDB. The TWDB provides information via this web site as a public service. Neither the State of Texas nor the TWDB assumes any legal liability or responsibility or makes any guarantees or warranties as to the accuracy, completeness or suitability of the information for any particular purpose. The TWDB systematically reviews or removes data discovered to be incorrect. If you find inaccurate information or have questions, please contact WDI-Support@twdb.texas.gov.



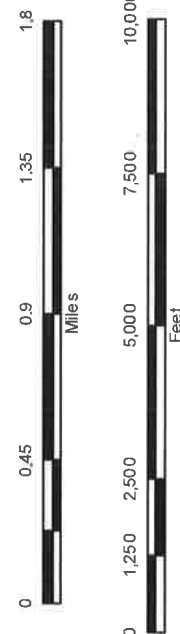
Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap contributors, and the GIS User Community

December 16, 2016

1 inch = 3,009 feet



PREPARED BY:

RAILROAD COMMISSION of TEXAS

P.O. BOX 12967
AUSTIN, TX 78711-2967

Source: RRC Public GIS Viewer

NOTICE/DISCLAIMER: Mapping data sets are provided for informational purposes only. These data sets are continuously being updated and refined. Users are responsible for checking the accuracy, completeness, currency and/or suitability of these data sets themselves. This is not a survey grade product and should not be used to define or establish survey boundaries.



Radial Cement Bond Gamma Ray CCL Log

Company Xto Energy
Well University Blk 20 #1310H
Field Phantom(Wolfcamp)
County Winkler
State Texas

Company Xto Energy
Well University Blk 20 #1310H
Field Phantom(Wolfcamp)
County Winkler State Texas

Location: API # : 42-495-33713
239' FNL & 1224' FEL
Section 13, Block 20, Abstract A-U14
UL Survey
SEC TWP RGE
Permanent Datum Ground Level Elevation 2812'
Log Measured From KB 27' APD
Drilling Measured From KB

Other Services

Elevation

K.B. 2839'
D.F. 2838'
G.L. 2812'

Date	11/26/2017		
Run Number	One		
Depth Driller	22117'		
Depth Logger	12280'		
Bottom Logged Interval	12278'		
Top Log Interval	Surface		
Open Hole Size	8 3/4"		
Type Fluid	Water		
Density / Viscosity	-		
Max. Recorded Temp.	-		
Estimated Cement Top	7420'		
Time Well Ready	On Arrival		
Time Logger on Bottom	See Log		
Equipment Number	WL-819		
Location	Midland, Texas		
Recorded By	Casey Pearson		
Witnessed By	Rob Lane		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
One	12 1/4"	Surface	1100'				
Two	8 3/4"	1100'	11970'				
Three	6 1/8"	11970'	22117'				

Casing Record		Size	Wgt/Ft	Top	Bottom
Surface String		9 5/8"	40# HCL-80	Surface	1100'
Prot. String		7"	32# CYP-110	Surface	11970'
Production String		4 1/2"	13.5# P-110	11180'	22117'
Liner					
Marker Joints				11056' to 11078'	11788' to 11810'

<<< Fold Here >>>

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 12 December 2016**GAU Number:** 164240**Attention:** XTO ENERGY INC.
ATTN ALAN CODY
FORT WORTH, TX 76102**API Number:** 49533710
County: WINKLER
Lease Name: UNIVERSITY BLK 20**Operator No.:** 945936**Lease Number:**
Well Number: 1307H
Total Vertical Depth: 12500
Latitude: 31.726233
Longitude: -103.285400
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U14; Block-20; Section-13

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The interval from the land surface to the base of the Allurosa, which is estimated to occur at a depth of 950 feet, must be protected.

Please send Gamma Ray/Porosity log of this well when it is available.

This recommendation is applicable for all wells drilled in this Section 13 on this Lease.

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 12/08/2016. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

Groundwater Advisory Unit, Oil and Gas Division

